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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,638	11/15/2001	Hisashi Ishikura	Q67164	7428

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2100 Pennsylvania Avenue, N.W.
Washington, DC 20037

EXAMINER

MARIAM, DANIEL G

ART UNIT PAPER NUMBER

2621

DATE MAILED: 11/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/987,638

Applicant(s)

ISHIKURA, HISASHI

Examiner

DANIEL G MARIAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/15/2001.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 5-6, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Salganicoff, et al. (6,252,977).

With regard to claim 1, Salganicoff, et al. discloses a face portion, i.e., eye, detecting apparatus comprising: at least one illumination means (items 2 and 4 in Fig. 1), for illuminating a face portion of a human being (item 1, in Fig. 1) from different directions from each other (left and right of camera 11, as shown in Fig. 1); photographing means, i.e., camera, for photographing the face portion which is illuminated by said illumination means (item 11, in Fig. 11); illumination lighting control means for controlling turn-ON operation of said illumination means (item 14, in Fig. 1); photographing control means (which corresponds to strobing device) for controlling said photographing means in synchronism with the turn-ON operation of said illumination means (item 12, in Fig. 1; and col. 2, lines 50-60); and face portion detecting means for removing a reflection image of an article having a luster reflection surface, i.e., specular reflection from the surface of the eyeglass, by employing at least one image which is acquired by said photographing means in synchronism with the turn-ON operation of said illumination means, whereby only a determined face portion is extracted, i.e., image of the eye without the specular reflection (See for example, col. 2, line 61 through col. 3, line 19).

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With regard to claim 5, at least a portion of said one illumination means is arranged within a range separated from an optical axis of said photographing means by a constant distance (As shown in Figure 1, the arrangement of the at least a portion of the one illumination and the optical axis of the camera is separated by a distance, and since Salganicoff does not give any indication of varying the distance between the illuminator and the camera, the distance shown in the arrangement of Fig. 1 is invariable).

With regard to claim 6, at least one of said plurality, i.e., two, of illumination means is arranged within a range separated from the optical axis of said photographing means by a constant distance (As shown in Figure 1, the arrangement of the at least one illumination and the optical axis of the camera is separated by a distance, and since Salganicoff does not give any indication of varying the distance between the illuminator and the camera, the distance shown in the arrangement of Fig. 1 is invariable).

With regard to claim 12, the irradiation light of said illumination means corresponds to infrared rays (col.6, lines 15-16).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishiwaka, et al. (5,621,457) in view of Ueno, et al. (5,293,427).

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With regard to claim 1, Ishiwaka, et al. (hereinafter "Ishiwaka") discloses at least one illumination means, i.e., illuminators 10 and 2, for illuminating a face portion, i.e., eye ball, of a human being from different directions from each other (as shown in Fig. 1); photographing means, i.e. camera, for photographing the face portion which is illuminated by said illumination means (item 1, in Fig. 1); illumination lighting control means for controlling turn-ON operation of said illumination means (item 118, in Fig. 1); (photographing control means for controlling said photographing means in synchronism) with the turn-ON operation of said illumination means (See for example, col. 5, lines 45-55); and face portion detecting means for removing a reflection image of an article having a luster reflection surface by employing at least one image which is acquired by said photographing means in (synchronism) with the turn-ON operation of said illumination means, whereby only a determined face portion is extracted, i.e., retina reflected image (See for example, col. 6, lines 55-67). Ishiwaka does not expressly call for photographing control means for controlling said photographing means in synchronism with the turn-ON operation of said illumination means. However, Ueno, et al. (See item 5, in Fig. 1) teaches this feature. Therefore, it would have been obvious to one having ordinary skill in the art to incorporate the teaching as taught by Ueno, et al into the system of Ishiwaka if for no other reason than to match the timing at which the face is irradiated by the illuminator with that of the camera that takes images of the irradiated face.

With regard to claim 2, said face portion corresponds to an eye portion (See item 101, in Fig. 1; and Figs. 6, 7 & 9 of Ishiwaka), and said face portion detecting means detects a retina reflection image which is formed by that the irradiation light of said illumination means is reflected on a retina of the human being (See for example, item 104, in Fig. 1).

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With regard to claim 11, the irradiation light of said illumination means corresponds to near infrared rays (See col. 4, line 42 of Ishiwaka).

With regard to claim 12, the irradiation light of said illumination means corresponds to infrared rays (See item 1, in Fig. 1 of Ueno, et al).

Allowable Subject Matter

5. Claims 3-4 and 7-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the prior art disclose or fairly suggest turning-ON the illumination lighting control means in a continuous manner; and while said face portion detecting means employs a plurality of illumination means in a plurality of images which are acquired by said photographing means in synchronism with the turn-ON operation of said illumination means, said face portion detecting means removes a reflection image whose reflection position is moved among said plurality of images as the reflection image of the article having the luster reflection surface; the face portion detecting means detects as the retina reflection image, such a reflection image which is present within a constant region among the images acquired by the photographic means, and an illuminance level of which is higher than, or equal to a predetermined value; and at least a portion of the one illumination means is arranged within a range separated from the optical axis of the photographing means by a constant distance, and the illumination means owns a predetermined shape, the face portion detecting means detects as the retina reflection image, such a reflection image which is present within constant region among the images acquired by said photographing means, and the luminance level of which is higher than, or equal to a predetermined value, and furthermore,

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removes such a reflection image having a shape identical to said predetermined shape of said illumination means as the reflection image of the article having the luster reflection surface. It is for these reasons in combination with all of the other elements of the claims that claims 3-4 and 7-10 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent Numbers: 4768088, 5598145, 5614967, 5801763, and 6055322.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL G MARIAM whose telephone number is 703-305-4010. The examiner can normally be reached on M-F (7:00-4:30) FIRST FRIDAY OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LEO BOUDREAU can be reached on 703-305-4607. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


DANIEL MIRIAM
PRIMARY EXAMINER

November 8, 2004